

REMARKS

This amendment is offered in response to the Office Action of January 8, 2009.

The Office Action rejected Claims 1, 2, 4, 5, 18, and 19 under 35 U.S.C. §102(b) as being anticipated by Simons et. al. (U.S. Patent No. 5,900,930). The Office Action rejects Claim 20 under 35 USC 103(a) as being unpatentable over Simon et al. The Office Action rejects Claims 6 – 15 and 17 under 35 U.S.C. §103(a) as being unpatentable over Simon et al in view of Hinckley et al. (U.S. Patent No. 6,844,871).

By way of amendment, the applicant has amended Claims 1, 4, 5, and 17 and has cancelled Claims 2 and 6 – 15, without prejudice or disclaimer. Claims 1, 4, 5, 17 – 20 are pending in this application.

Claim 1 has been amended to add the limitation “said circumferential skirt includes a random pattern” and the additional limitation (in underlined) that “said optical system being positioned to optically acquire surface sequential images from said random pattern of said side circumferential skirt and calculate differences in said sequential surface images of said random pattern thereby determining the direction and relative magnitude of rotation of said rotatable platter”.

The Simon reference is directed toward absolute magnitude and angular position based on a definite, coded data pattern. Simon discloses two data patterns with an inverse relationship; see column 9, lines 55 – 59. Similarly, Simon discloses “a plurality of digital patterns positioned on a surface that rotates with said rotating body”; see column 10, lines 6 – 7. Figures 1 – 6, and figure 10 of Simon all illustrate coded patterns. Column 2, lines 43 – 45 which describes the code wheel 20 of figure 1 containing a plurality of patterns or code symbols. Column 4 lines 1 - 13 describe the marking of figures 3 and 4 containing pattern rows that identify unique binary

numbers. Figures 5 and 6 show a window pattern that contains at least one code row and one checking row. See column 4, lines 59 – 61. The flow diagram of Figure 7 is directed toward a coded pattern. In the description of Figure 7 in column 5, lines 48 – 51, a digital binary value of the code row uniquely identifies the rotational position.

Among the limitations in newly amended Claim 1 of the currently claimed invention that is neither taught nor suggested in the Simon reference is that the “said circumferential skirt includes a random pattern” where the “relative magnitude of rotation” is determined by calculating “differences in said sequential surface images of said random pattern”. A random pattern, by definition, does not include deliberate binary coding. Claim 1, in the currently claimed invention is now directed toward a device that determines relative position using a non-coded or random pattern. By contrast, the Simon disclosure is directed toward an absolute displacement device that uses binary coding in order to determine that absolute position. Therefore, the rejection to Claim 1 of the presently claimed invention is overcome. Since Claims 4, 5, 18 and 19 are dependent on Claim 1; the applicant respectfully submits that the rejections of these claims are similarly overcome. Similarly, the rejection to Claim 20, which stated that Claim 20 was an obvious variant of the Simon reference, is similarly overcome.

Because the Simon reference is an absolute displacement device, that depends on a plurality of coded digital patterns, it would be impossible to modify the Simon reference or combine it with any other reference, including the Hinckley reference, to yield the currently claimed invention in amended claim 1 without both changing the principle of operation of the Simon reference and rendering it unsatisfactory for its intended purpose. The resulting device would be only be determine the relative displacement from comparing sequential images of a random pattern which as stated in the previous paragraphs is a different principle of operation

than the currently claimed invention. In addition, the resulting device would not be able to determine absolute angular position, only relative angular position rendering it unsatisfactory for its intended purpose. For this reason, the applicant respectfully submits that the rejections of claim 17 are overcome.

It is therefore respectfully submitted that this rejection is overcome.

For all of the reasons above, it is respectfully submitted that all of the presently pending claims are in immediate condition for allowance. The Examiner is respectfully requested to withdraw the rejections of the claims, to allow the claims, and to pass this application to early issue.

Respectfully submitted,



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